

## Patent Abstracts of Japan

PUBLICATION NUMBER : 01183071  
 PUBLICATION DATE : 20-07-89

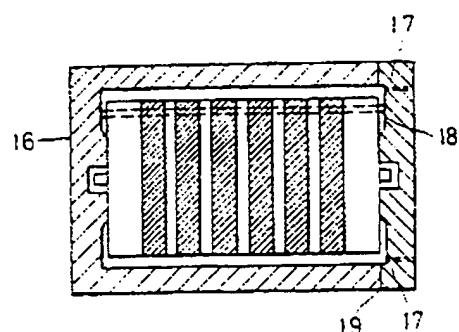
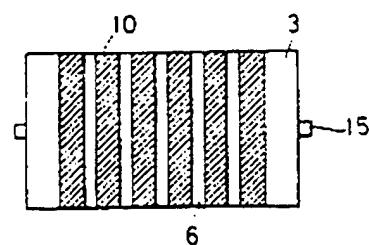
APPLICATION DATE : 11-01-88  
 APPLICATION NUMBER : 63002478

APPLICANT : MEIDENSHA CORP;

INVENTOR : ANDO YASUO;

INT.CL. : H01M 8/02 H01M 8/18

TITLE : ELECTROLYTE CIRCULATION TYPE  
 STACKED SECONDARY CELL



ABSTRACT : PURPOSE: To make a cell lightweight and to increase energy density per weight by wrapping an electrolyte circulation type stacked secondary cell with a resin molding formed by injection molding.

CONSTITUTION: A stacked cell is set in an injection molding mold 16, and a synthetic resin which is chemically resistant to an electrolyte is injected from a gate 17 to wrap the cell with a resin molding. A passing through bolt 18 is installed in the mold 16 to prevent the displacement of the components of the cell. The bolt 18 is inserted into frame-mounted membranes 10, frame-mounted intermediate electrodes 6, and end plate electrodes 3 to stack them inside the mold 16. To prevent electrolyte leakage from the cell, ribs are protruded from the frames of the electrodes 6 and grooves for accepting the ribs are installed in the frames of the membranes 10. The rib's tips or the grooves are coated with hot melt adhesive to seal stacked surfaces.

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PUBLICATION NUMBER : 03079783  
 PUBLICATION DATE : 04-04-91

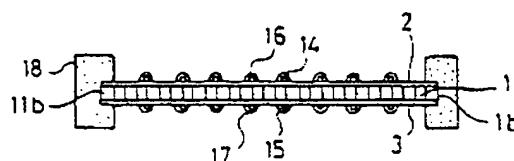
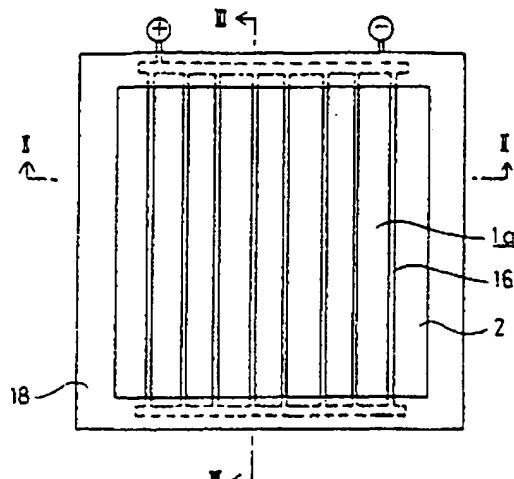
APPLICATION DATE : 22-08-89  
 APPLICATION NUMBER : 01214166

APPLICANT : MITSUBISHI ELECTRIC CORP;

INVENTOR : YAMAUCHI SHIRO;

INT.CL. : C25B 11/20 // H01M 8/02

TITLE : SOLID-POLYMER ELECTROLYTE  
 MEMBRANE DEVICE



**ABSTRACT :** PURPOSE: To develop the solid polymer electrolyte membrane device which is not corroded when supplied with a power by providing a porous anode and cathode on both sides of the membrane and fixing a current collecting electrode coated with a film resistant to moisture and corrosion on both electrodes.

**CONSTITUTION:** Porous Pt plating films 2 and 3 are formed in 1-5 $\mu$ m thickness on both sides of the solid-polymer electrode membrane 1 having a cation- exchange function by electroless plating, for example, and the current collecting electrodes 14 and 15 consisting of an Ag paste and having 0.2mm width and about 0.2mm thickness are formed thereon at intervals of about 10mm by screen printing, etc. Polyurethane-resin coating films 16 and 17 are formed on the electrodes 14 and 15 to cover them by thermosetting. The treated solid-polymer electrolyte membrane 1a is held in a metallic mold, and a synthetic resin is injected to form a framework 18 and to cover the exposed part 1b. By this structure, a power is supplied without contact with external air, and the corrosion of the device is prevented.

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